

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SEATTLE, WASHINGTON 98168

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In the matter of the petition of

THE BOEING COMPANY

for an exemption from §§ 25.807(c)(1)
and (5), 25.809(f)(1), and 25.813(b) of
the Federal Aviation Regulations

Regulatory Docket No. 13203

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GRANT OF EXEMPTION

By letter dated February 5, 1986, Mr. Reginald Utting, Manager, Airworthiness, Everett Division, The Boeing Company (Boeing), P.O. Box 3707, Seattle, Washington 98124, petitioned for an amendment of Exemption No. 1870B to permit the type certification of Boeing Model 747-100 airplanes, when specially modified, for carriage on the upper deck of up to five noncrewmembers (persons not necessarily assigned some duty associated with the operation of the airplane) in addition to crewmembers, with a limit on total upper deck occupancy of eight. The Boeing Model 747-100 airplanes for which this petition is applicable must be modified in accordance with Supplemental Type Certificates (STC) SA976CE-D, SA977CE-D and SA978CE-D. A Model 747-100 airplane modified in accordance with these three STC's is often unofficially referred to as a Boeing 747-100SF. Exemption No. 1870B, issued to the Boeing Company on October 26, 1981, provides for the carriage of up to five noncrewmembers with a limit on total upper deck occupancy of eight for the Boeing Model 747-200F and 747-200C airplanes.

Sections 25.807(c)(1) and (5), 25.809(f)(1), and 25.813(b) of the Federal Aviation Regulations (FAR) set forth, in pertinent part, respectively, the requirements for the number, size, and location of passenger emergency exits, descent assist means, and exit assist space. Exemption No. 1870B grants an exemption from these requirements to the extent necessary to permit the type certification of the Model 747-200F and -200C airplanes having a main-deck cargo configuration and a nonstandard emergency exit configuration on the upper deck, for a total occupancy of eight, which includes up to five noncrewmembers in addition to the crewmembers. The nonstandard emergency exit configuration approved under the exemption consists of an emergency exit having the dimensions of a Type I emergency exit on the right side of the airplane and an overhead escape hatch with

individual inertia reels for each occupant. Five of the inertia reels are equipped with body harnesses for the noncrewmembers. The exemption restricts the noncrewmembers to persons in limited categories, such as employees of the operator, certain military and government personnel, and cargo handlers. The exemption requires that the noncrewmembers be found by the operator to be physically able to use the emergency escape provisions and that they be briefed by a flight crewmember on the use of the provisions prior to each flight.

Sections of the FAR affected:

Section 25.807(c)(1) and (5) provides, in pertinent part, that airplanes having a passenger seating capacity in the range from 1 through 9, inclusive, on which the vertical location of the wing does not permit installation of Type IV exits, be fitted with an emergency exit having at least the dimensions of a Type III emergency exit on each side of the fuselage.

Section 25.809(f)(1) provides, in pertinent part, that an approved means to assist occupants in descending to the ground, such as assist means being a self-supporting slide or equivalent.

Section 25.813(b) provides, in pertinent part, that an assist space be provided next to each exit.

The petitioner's supportive information is as follows:

1. The exit arrangement, accommodations and escape equipment in the upper deck of the 747-100SF is identical to that in the 747-200F and -200C covered by Exemption No. 1870B and the proposed conditions in this exemption are identical.
2. Currently twenty-three airplanes, of which approximately fourteen are on the U.S. Register, would be affected. As provided in support of previous requests for amendment of this exemption, the utility of these airplanes would be improved by approval of this amendment.

A summary of the petitioner's February 5, 1986, request for exemption was published in the Federal Register on March 31, 1986 (51 FR 10963). No comments were received.

The FAA analysis/summary is as follows:

The FAA has reviewed the petitioner's request. The Model 747-200F and -200C have operated since 1973 without any adverse effect on safety. The specially modified 747-100, the so called -100SF, is identical to the 747-200F and -200C airplanes in terms of operating conditions and airplane configuration, and the proposed conditions for this exemption are also identical. The FAA, therefore, has determined that this action can be taken without compromising safety.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), the Boeing Company is granted an exemption from §§ 25.807(c)(1) and (5), 25.809(f)(1), and 25.813(b) of the FAR to the extent necessary to permit type certification of the Models 747-200F, -200C (main deck cargo configuration) and -100 (when modified in accordance with STC's SA976CE-D, SA977CE-D and SA978CE-D) for carriage on the upper deck of not more than five persons other than flight crewmembers, with the total number of upper deck occupants not to exceed eight, when the upper deck is configured with one approved emergency exit having the dimensions of a Type I emergency exit, and one approved emergency exit hatch that has eight inertia reels and five body harnesses, subject to the following conditions:

The FAA-approved Airplane Flight Manual must contain an operating limitation restricting total upper deck occupancy to eight persons and occupancy by other than flight crewmembers to a maximum of five persons, designated by the operator, that are--

1. Included in one of the following categories:
 - (a) A crewmember;
 - (b) An employee of the operator;
 - (c) An FAA air carrier inspector or an authorized representative of the National Transportation Safety Board who is performing official duties;
 - (d) Any person determined by the operator, for the particular flight on which carried, to be necessary for:
 - (1) The safety of the flight;
 - (2) The safe handling of animals;
 - (3) The safe handling of radioactive materials;
 - (4) The security of valuable or confidential cargo;
 - (5) The preservation of fragile or perishable cargo;
 - (6) The operation of special equipment for loading or unloading cargo; or
 - (7) The loading or unloading of outsize cargo.
 - (e) A person traveling to or from an assignment by the operator involving a function described in paragraph 1(d);
 - (f) A person performing duty as an honor guard accompanying a shipment made by or under the authority of the United States; or
 - (g) A military courier, military route supervisor, military cargo contract coordinator, or a designated flight crewmember of a military cargo contract air carrier or commercial operator when carriage of such person is specifically authorized by the appropriate U.S. armed force.
2. Briefed by a flight crewmember on the use of the escape means

prior to each flight; and

3. Found by the operator to be physically able to use the escape means provided.

This exemption will remain in effect unless superseded or revoked.

Issued in Seattle, Washington, on June 2, 1986.

A handwritten signature in cursive script, reading "Wayne J. Barlow". The signature is written in dark ink and is positioned above the printed name and title.

Wayne J. Barlow, Director
Northwest Mountain Region